



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,826	10/13/2005	Noriko Ogawa	12218/51	4583
23838	7590	11/29/2007		
KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005				
EXAMINER LILLING, HERBERT J				
ART UNIT			PAPER NUMBER	
1657				
MAIL DATE			DELIVERY MODE	
11/29/2007			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/527,826

Applicant(s)

OGAWA ET AL.

Examiner

HERBERT J. LILLING

Art Unit

1657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3-14-05;12-28-05;6-19-06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6-14-05;12-28-05;6-19-06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1657

1. Receipt is acknowledged of a preliminary amendment filed March 14, 2005 and three prior art information disclosure statements filed March 14, 2005, December 28, 2005 and June 19, 2006.

2. Claims 1-10 are pending in this application which is a 371 of PCT/JP03/12496 filed September 30, 2003 which claims benefit to JAPAN 2002-285863 filed September 30, 2002.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liddell et al U.S. 5,952,460 alone or further in view of Honma et al 20030032151 or Yano et al US 20030049806.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Liddell et al teaches the following:

Example 2: A sample of the cells was first heat treated at 150.degree. C. for 80 seconds at pH 6.5. .... The temperature and pH conditions were maintained for 12 hours.

**For Example 5**

**Example 2 is repeated**, except that, a PHA slurry as described in our copending GB application 9416691.5 is used. That is, a suspension of cells of *Alcaligenes eutrophus* grown on glucose+propionic acid under phosphorus limitation to give at 176 g/l cells containing 72.2% of PHBV (21 mol % V) is heat treated at 150.degree. C. for 80 sec at pH 6.5, treated with a proteolytic enzyme (EC 3.4.21.14) at pH 8, 70.degree. C. for 2 h, then freed of solubilised non-PHA cellular material (NPCM) by centrifugation and resuspension. The washed PHBV particles are resuspended in water and at 80.degree. C., pH 7, treated with hydrogen peroxide 16 g/l for 12 hours.

In view of the **above example 5**, the treatment of hydrogen peroxide is very slightly higher than 1% at 1.6% but the pH conditions were maintained for the 12 hours based on "Example 2 is repeated, except..."

Thus, even though the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art;

do not meet the conditions but in view of the new Supreme Court Decisions regarding the obviousness (or lack thereof) of claimed inventions in light of the Supreme Court's recent decision in *KSR International Co. v. Teleflex Inc (TFX)* ., 82 USPQ2d 1385 (2007) the references render the claims prima facie obvious for the claimed subject matter.

The Supreme Court identified a number of rationales as suggested by the Supreme Court in the KSR decision which provide guidance about how to reason from the facts to the legal conclusion of obviousness.

The only differences as indicated above whereby :

a- the reference teaches that the hydrogen peroxide concentration is only less than about one half of one percent difference which difference is considered to be obvious to one of ordinary skilled in the art to reasonably expect the concentration to give essentially the same results in the treatment of the microorganism cells.

b- the pH is maintained by adding an alkali either continuously or intermittently whereby the disclosure of Liddell et al clearly indicates that the conditions were maintained based on "Example 2 .." whereby the above solution in Example 2 had maintained the pH for 12 hours which is reasonable to presume that this example also maintained the pH for 12 hours;

and

c- the control of the pH is not stated by the reference. It would have been reasonable for one of ordinary skilled in the art to employ the most common reagent for controlling pH, which is sodium hydroxide or any other alkali reagent.

References Honma et al and Yano et al teach that the microorganism *Aeromonas caviae* is well know to produce copolymers of 3-polyhydroxyalkanoates which products of the fermentation process one of ordinary skilled in the art would reasonably expect to be purified by the method of Liddell et al.

4. **No claim is allowed.**

5 The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Art Unit: 1657

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lilling whose telephone number is 571-272-0918 and Fax Number is **571-273-8300**, or SPE Jon Weber whose telephone number is 571-272-0925. Examiner can be reached Monday-Friday from about 7:30 A.M. to about 7:00 P.M. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

H.J.Lilling: HJL  
(571) 272-0918  
Art Unit **1657**  
November 23, 2007



Dr. Herbert J. Lilling  
Primary Examiner  
Group 1600 Art Unit 1657